

STAFFORD COUNTY SCHOOL BOARD

Agenda Consideration

TOPIC: Water Quantity, Quality &
Distribution Update - Hartwood
Elementary School

ITEM NO.: 4G

PREPARED BY: Scott Horan,
Executive Director,
Planning & Construction

MEETING: February 14, 2006

ACTION DATE: N/A

Andre' A. Nougaret,
Assistant Superintendent
for Support Services

ACTION REQUESTED BY THE SUPERINTENDENT: That the School Board receive for information an update on the Hartwood Elementary School Water Quantity, Quality & Distribution upgrade efforts.

KEY POINTS:

1. Hartwood Elementary School located at 14 Shackelford's Well Road in the Hartwood Magisterial District is the only school in the County that maintains and operates a well for potable water and a package sewage treatment plant to support its water and wastewater requirements. Over the past 10 years HES has been faced with water quantity (not enough) and water quality (elevated levels of lead, copper, etc.) issues that have adversely impacted school operations. Several initiatives to bring County water to HES have failed due mainly to cost and growth issues. In an effort to improve the quantity and quality of the potable well water at HES, staff in concert with the Stafford County Utilities Department, HES Administration and the Virginia Department of Health (VDH) initiated several repair and maintenance efforts to increase water supply, improve water storage/distribution and water quality.
2. From July 2005 to present, staff has periodically provided informational updates to the School Board on the status of three main repair/upgrade efforts currently underway to improve water quantity and quality at HES.
3. The following is the current status for each effort:
 - a. Well #2 Operational Status – A second well was constructed in 2001 to increase the water supply capability and provide a back-up to well #1. Upon project completion staff was unable to make the well operational due to failure to obtain VDH design and construction permits. No action was taken to resolve this issue until Spring/Summer 2005. Staff working with the County Utilities Department recreated the design drawings and submitted the design review application package with all appropriate supporting documentation to VDH on June 29, 2005. VDH provided design review

comments on December 14, 2005. On January 25, 2006, staff and Stafford County Utilities Department met with VDH reviewers to discuss their design review comments.

Staff estimates all review comments will be answered and the application package re-submitted to VDH no later than March 15, 2006. We anticipate VDH will take at least 45 days to review the re-submittal and provide approval for a construction permit.

Upon approval, staff will implement a number of additional upgrades identified in the approved design that were not installed in the original project. Upon completion (estimated June 2006), staff will request VDH issue an operational use permit for well #2 (estimated July 2006).

b. Analysis of the Exterior Water Supply and Distribution System – With Well #2 scheduled to become operational, staff initiated action to ensure the remainder of the external water supply and distribution system at Hartwood Elementary School was operating at the most optimal and efficient condition. Staff contracted with Stantec Consulting Engineers to initiate the subject analysis. Analysis was completed in January 2005 and results were presented to the staff. Recommendations were divided into two areas, those that could be completed with in-house assets (SCPS Maintenance and Stafford County Utilities Departments) and those that required an engineering design and subsequent construction contract. All in-house recommendations have been completed. They included the following:

- Upgrade of Chlorination Filter System
- Installation of a Greensand Filter
- Inspection and Maintenance of Pressure Tank

The engineering design to correct the remaining items identified in the analysis is 100% complete. The design includes the following:

- Expansion of the Existing Potable Water Reservoir
- Upgrade Chemical Treatment Process (Granular Activate Carbon and Limestone Column) from Series to Parallel Operations
- Install New Heaters in Granular Activate Carbon, Limestone and Pressure Tank Facilities
- Upgrade Reservoir control and low level alarms

On November 18, 2006, staff submitted the design review application to VDH for review and approval. We estimate the review to be completed by VDH no later than March 15, 2006. Staff plans to address all review comments within one (1) week of receipt of review comments. Staff estimates another 45 days for the re-submittal comments to be reviewed by VDH (estimated May 15, 2006). Staff plans to advertise the construction project in late May 2006 with construction work to take place in July & August 2006.

c. Analysis of the Interior Water Distribution System – In an effort to complete the comprehensive review of the entire potable water system at Hartwood Elementary School, a detailed analysis of the interior water distribution system was determined to be required. The analysis is currently 99% complete with an expected completion

date of March 2006. Staff will review the results and formulate a plan to address all recommendations by May 2006.

SCHOOL BOARD GOAL: #5 - Provide facilities that promote student learning and community support.

#7 - Provide school environments where teachers are safe to teach and students are safe to learn.

FUNDING SOURCE: Carry-over of previously approved Incomplete Projects from FY05 (Appropriated to FY06 School Operating Fund by Board of Supervisors on November 21, 2005)

AUTHORIZATION REFERENCE: Policy 4-28 Purchasing: Generally